Status of digital pixel

Tianya Wu

CEPC MOST2 Chips Meeting

twu@ifae.es

23-04-2019

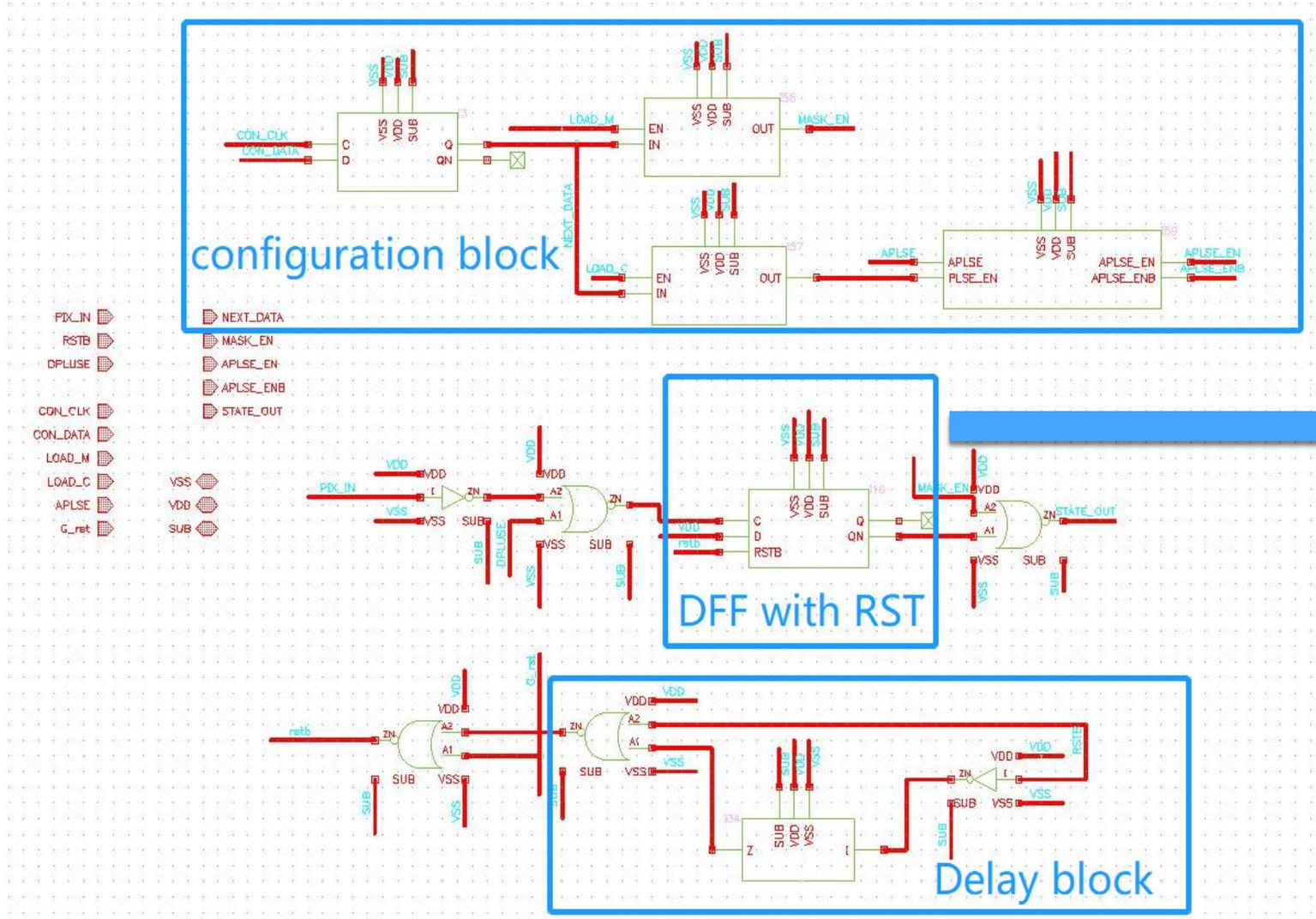
Institut de Física d'Altes Energies

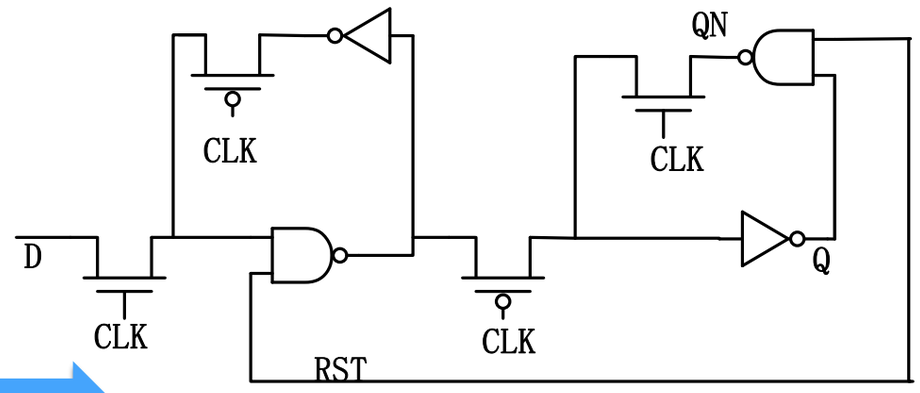
EXCELENCIA SEVERO OCHOA

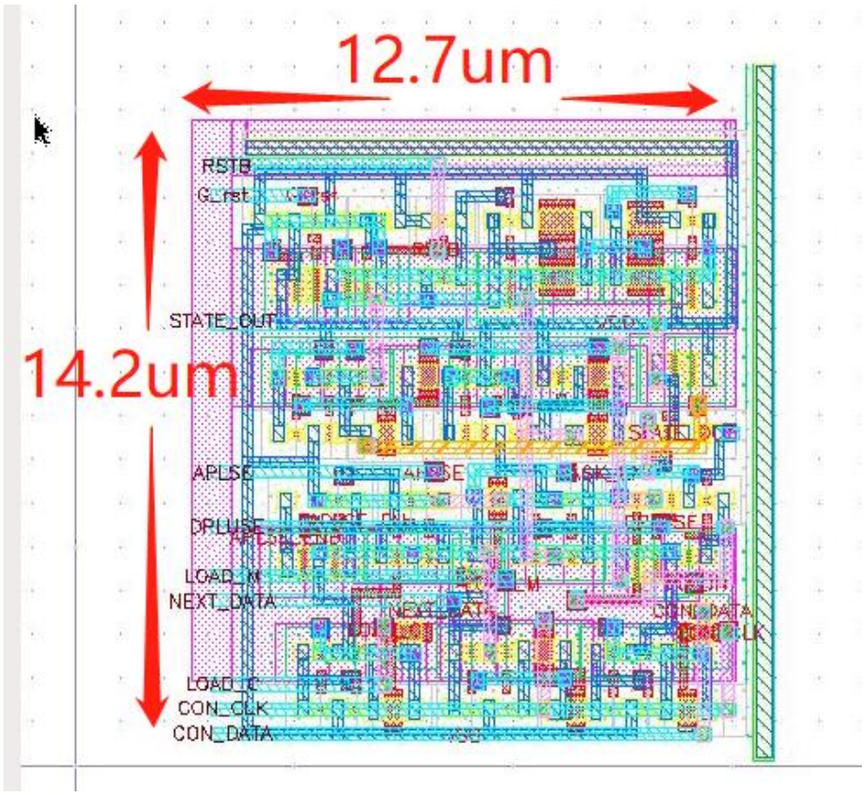
BIST Barcelona Institute of Science and Technology

CENTRAL CHINA NORMAL UNIVERSITY

Final digital cell scheme based on ALPIDE

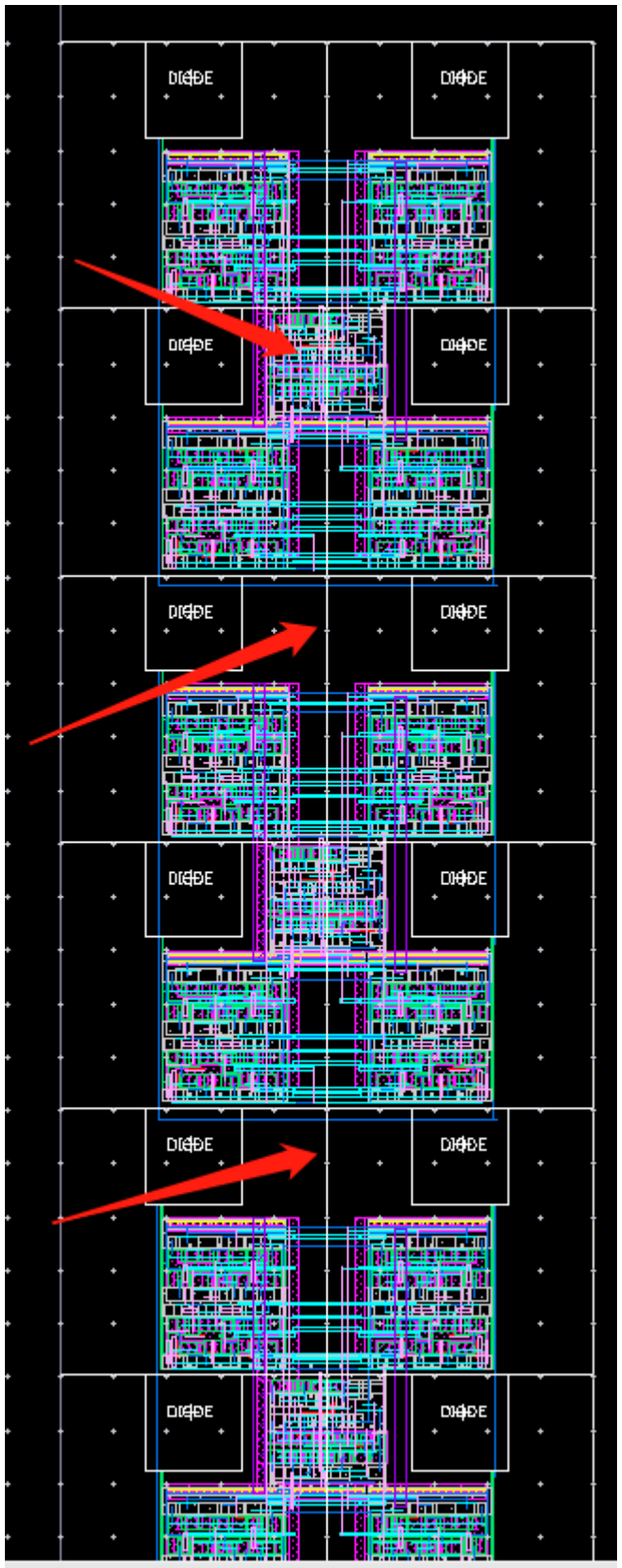






- It costs 16 transistors with dynamic DFF
- Total number of transistors is 76

Layout strategy of double column



- Finish the 4 pixels standard block with LVS clean.
- The first level encoder will in the center of 4 pixels.
- One double column with 128 pixels, it will cost 43 standard encoder cells with 4 levels and 7 bits address.
- The rest of room will be used to add higher level encoder and extra logics.

Thanks for your attention.